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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,307	07/20/2001	Steven Burch	8540G-000075	2021
27572	7590	10/01/2004	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C.			BHAT, NINA NMN	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	

1764

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/910,307	Applicant(s) BURCH ET AL.	
	Examiner N. Bhat	Art Unit 1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-20 and 24 is/are rejected.
- 7) ☒ Claim(s) 21-23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

1. The abstract of the disclosure is objected to because applicant has used legal phraseology "said reactor". Correction is required. See MPEP § 608.01(b).

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-20 and 24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,630,260. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the application and the patent provide a hydrocarbon fuel reformer that is supplied with water vapor extracted from the reformer's effluent stream. The fuel process for the production of hydrogen from a hydrocarbon fuel comprises a reactor for the production of hydrogen using an oxidant, water and hydrocarbon fuel and a water transfer device that transfers water vapor from the reformat produced by the reactor to the reactant (oxidant) used by the reaction comprising a water transfer membrane. In the instant case the reactant is air, the

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temperature is the same as has been claimed by the 6,630,260 patent and the water transfer membrane comprises poly[perfluorosulfonic] acid. The difference between the instant invention and that of the '260 patent is that in the patent the fuel cell is claimed instead of the broad term "reactor" and further there is included in the '260 two water transfer device as opposed to only one water transfer device as is claimed in the instant invention, the instant invention is a sub-combination of the combination fuel cell power plant which is claimed and to eliminate the second water transfer device and the fuel cell would have been obvious to one having ordinary skill in the art at the time the invention was made.

3. Claims 1-20 and 24 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13-14 of copending Application No. 10/348,127. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the instant invention and that of the '127 application claim a fuel processing system comprising a reactor for reforming a hydrocarbon fuel stream into a reformat stream comprising hydrogen and other constituents, the instant invention includes a water transfer device comprising a membrane which is relatively permeable to water and relatively less permeable to hydrogen for separating steam from removed hydrogen, in the '127 application a second membrane separator is included for removing hydrogen from the reformat stream. In the instant application, the reactor does not include a membrane separator for selectively removing the hydrogen from the reformat stream. The claims in both cases, use "comprising" language which opens the claims to the inclusion or exclusion

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of elements and its function thus to eliminate the hydrogen selective membrane from the fuel cell processor as claimed would have been obvious to one having ordinary skill in the art at the time the invention was made.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. Claims 1-13 and 24 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 10/627,145. Although the conflicting claims are not identical, they are not patentably distinct from each other because both inventions claim a fuel cell system that extracts water from the effluent of a fuel cell for supply to other components of the fuel cell system. The fuel cell system of the '145 application includes a fuel comprising an anode supply stream, a cathode input for an oxidant containing cathode supply stream, an anode effluent output, and a cathode output for cathode effluent comprising water produced by the fuel cell, and a water transfer device, the fuel cell as claims is no more than a reactor for the production of hydrogen containing reformat using an oxidant water and hydrocarbon fuel. The '145 application is narrower in scope than the instant application but both the apparatus are capable of producing hydrogen from a hydrocarbon fuel and both include the water transfer device, and the instant application is a sub-combination of the combination which has been claimed in the '145 application and it would have been obvious to the ordinary artisan that the subcombination would function equivalently to the elements claimed in the combination.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Claims 21-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. With a timely filed and properly executed terminal disclaimer, this case would be in condition for allowance as a fuel cell processor for the production of hydrogen from a hydrocarbon fuel comprising a hydrocarbon fuel comprising a reactor for the production of hydrogen-containing reformat using an oxidant, water and hydrocarbon fuel and a water transfer device that transfers water vapor from the reformat produced by the reactor to a reactant used by the reactor, comprising a water transfer membrane, a method of humidifying a reactor for fuel cell process and a water transfer device for the transfer of water vapor from a primary gas to a secondary gas in a fuel cell power plant having a primary gas inlet and primary gas outlet , a secondary gas inlet and a secondary gas outlet as claimed has not been taught either singularly or in combination by the prior art.

7. Smotkin teaches hydrogen permeable membrane for use in fuel cells and partial reformat fuel cells. Savage et al. teach fuel system having a compact water separator. Grover et al. '854 and 0019363 teach a gas-liquid separator for fuel cell system. Goebel et al. teach a fuel processing system having as recirculation for transient operations. Gittleman et al. teach a fuel processor module for hydrogen production for fuel cell engine using pressure adsorption.

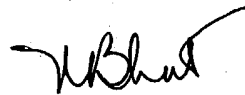
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 703-308-3879.

The examiner can normally be reached on Monday-Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone numbers for the organization where this application or proceeding is assigned are for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1700.



N. Bhat
Primary Examiner
Art Unit 1761

September 27, 2004